Polycotylidae

Polycotylidae is a family of plesiosaurs from the Cretaceous, a sister group to Leptocleididae.

With their short necks and large elongated heads, they resemble the pliosaurs, but closer phylogenetic studies indicate that they share many common features with the Plesiosauridae and Elasmosauridae. They have been found worldwide, with specimens reported from New Zealand, Australia, Japan, Morocco, the US, Canada, Eastern Europe, and South America.[1]

Phylogeny

Trinacromerum bentonianum from the Late Cretaceous of Kansas

Cladogram after Albright, Gillette and Titus (2007).[2]

Polycotylids

Temporal range: Early - Late Cretaceous, 103–66 Ma

Pre€ € O S D C P T J K PgN

Dolichorhynchops bonneri in the Rocky Mountain Dinosaur Resource Center

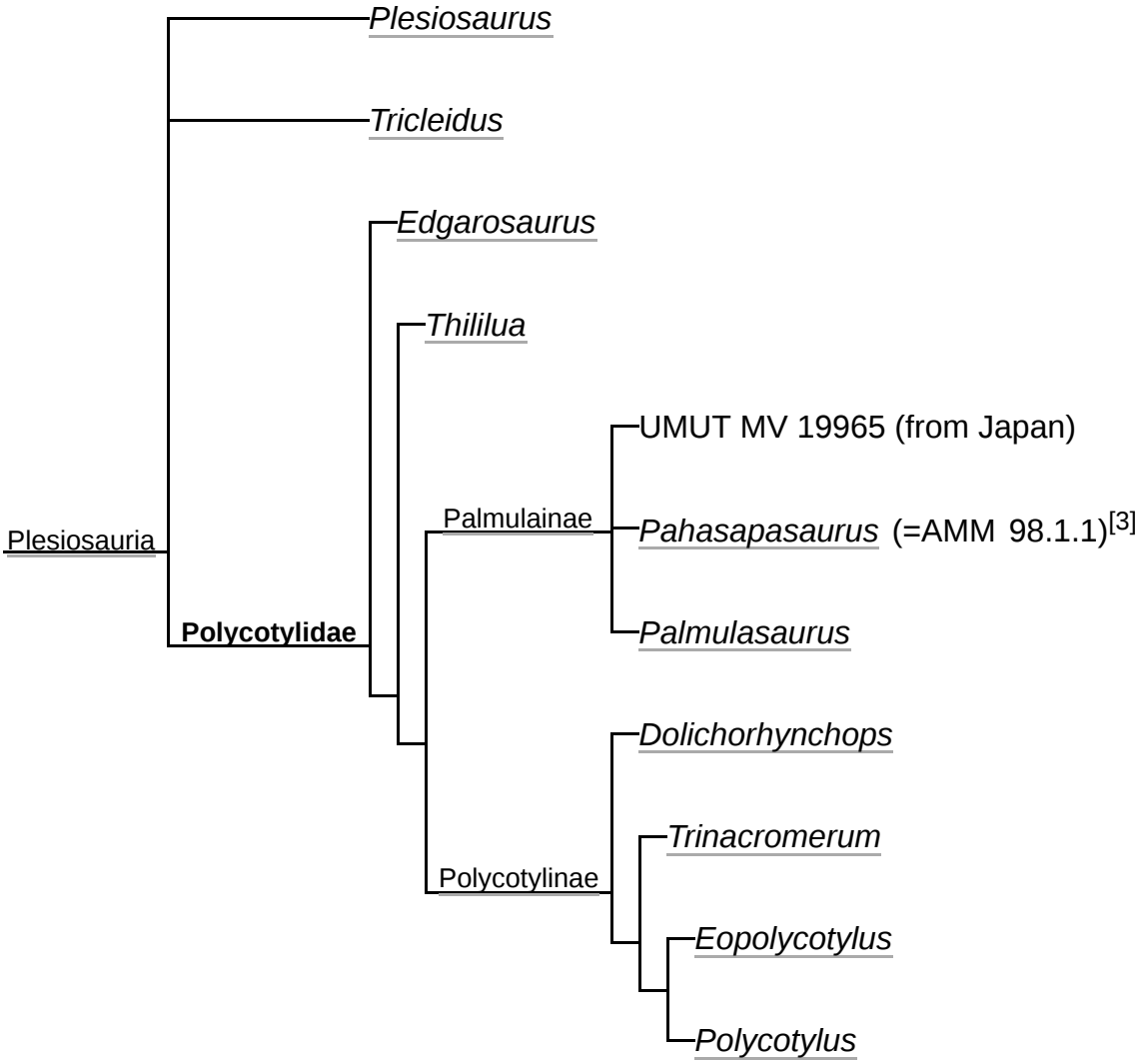
Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
Class:	Reptilia
Superorder:	†Sauropterygia
Order:	†Plesiosauria
Clade:	†Leptocleidia
Family:	†Polycotylidae Williston, 1909

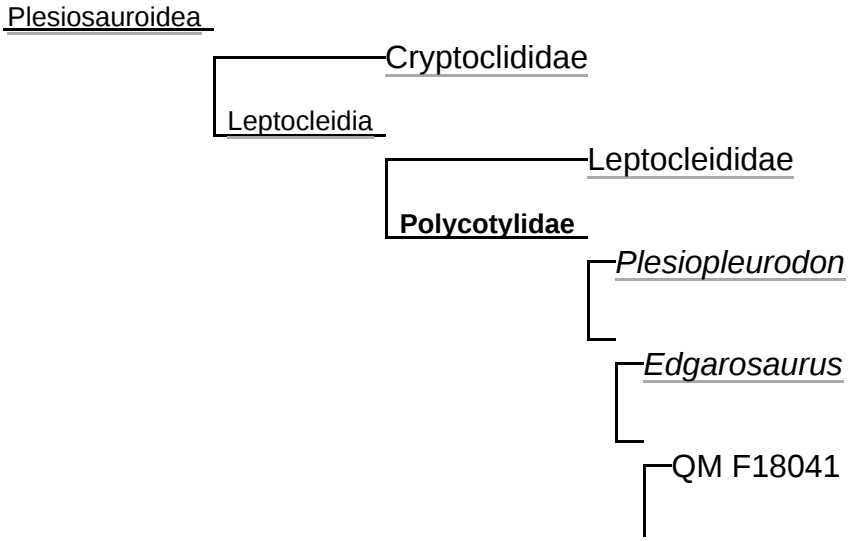
Genera

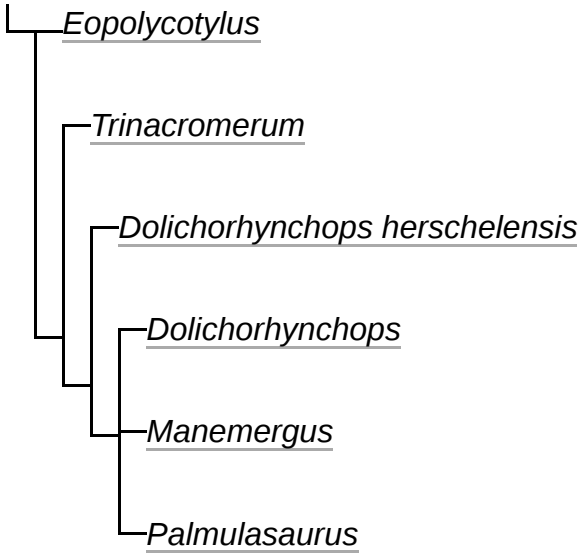
- †*Dolichorhynchops*
- †*Edgarosaurus*
- †*Eopolycotylus*
- †*Georgiasaurus*
- †*Manemergus*
- †*Mauriciosaurus*
- †*Pahasapasaurus*
- †*Palmulasaurus*
- †*Plesiopleurodon*
- †*Polycotylus*
- †*Rarosaurus*

- †*Sulcusuchus*
- †*Thililua*?
- †*Trinacromerum*
- †*Umoonasaurus*?

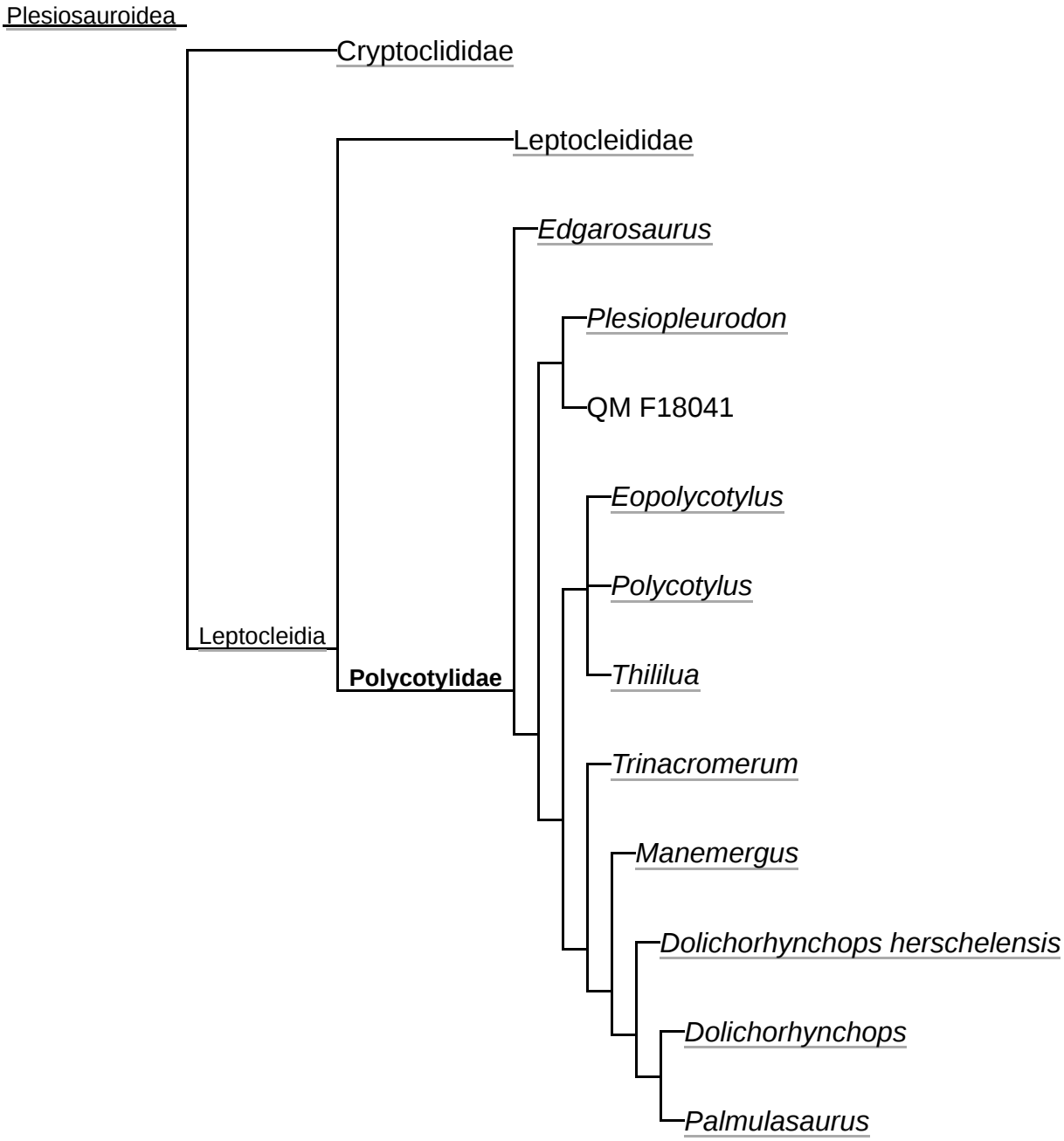


Cladogram after Ketchum and Benson (2010).[4]





Below is a cladogram of polycotylid relationships from Ketchum & Benson, 2011.[5]



External links

- Palæos: The Vertebrates (https://web.archive.org/web/20080414142638/http://www.palaeos.com/Vertebrates/Units/220Lepidosauromorpha/220.820.html#Polycotylidae), Lepidosauromorpha: Cryptocleidoidea: Tricleidia

References

1. Druckenmiller, Patrick S. & Russell, Anthony P. (2009). "Earliest North American Occurrence Of Polycotylidae (Sauropterygia: Plesiosauria) From The Lower Cretaceous (Albian) Clearwater Formation, Alberta, Canada" (https://web.archive.org/web/20110706211048/http://www.bio.ucalgary.ca/contact/faculty/pdf/russell/335.pdf) (PDF). *Journal of Paleontology*. **83** (6): 361–392. doi:10.1666/09-014.1 (https://doi.org/10.1666%2F09-014.1). Archived from the original (http://www.bio.ucalgary.ca/contact/faculty/pdf/russell/335.pdf) (PDF) on 2011-07-06.
2. Albright III, L. B., Gillette, D. D., and Titus, A. L., 2007b. Plesiosaurs from the Upper Cretaceous (Cenomanian-Turonian) Tropic Shale of southern Utah, part 2: polycotylidae (http://www.plesiosaur.com/database/pdf/albrightetal_2007_part2.pdf) Archived (https://web.archive.org/web/20110928220523/http://www.plesiosaur.com/database/pdf/albrightetal_2007_part2.pdf) 2011-09-28 at the Wayback Machine. Journal of Vertebrate Paleontology, v. 27, n. 1, p. 41-58.
3. Schumacher, B. A., 2007, A new polycotylid plesiosaur (Reptilia; Sauropterygia) from the Greenhorn Limestone (Upper Cretaceous; lower upper Cenomanian), Black Hills, South Dakota: In: The Geology and Paleontology of the Late Cretaceous marine deposits of the Dakotas, edited by Martin, J. E., and Parris, D. C., The Geological Society of America, Special Paper 427, p. 133-146.
4. Ketchum, H. F. & Benson, R. B. J. (2010). "Global interrelationships of Plesiosauria (Reptilia, Sauropterygia) and the pivotal role of taxon sampling in determining the outcome of phylogenetic analyses". *Biological Reviews*. **85**: 361–392. doi:10.1111/j.1469-185X.2009.00107.x (https://doi.org/10.1111%2Fj.1469-185X.2009.00107.x). PMID 20002391 (https://pubmed.ncbi.nlm.nih.gov/20002391).
5. Hilary F. Ketchum and Roger B. J. Benson (2011). "A new pliosaurid (Sauropterygia, Plesiosauria) from the Oxford Clay Formation (Middle Jurassic, Callovian) of England: evidence for a gracile, longirostrine grade of Early-Middle Jurassic pliosaurids". *Special Papers in Palaeontology*. **86**: 109–129. doi:10.1111/j.1475-4983.2011.01083.x (https://doi.org/10.1111%2Fj.1475-4983.2011.01083.x).

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